

24. NEW RECORD OF *HELIOTHIS PELTIGERA* DENIS AND SCHIFFERMULLER ON SUNFLOWER

Sunflower (*Helianthus annuus* Linn.) is a new introduction as an oilseed crop in the Punjab State. Because of its unique organoleptic and other properties it can be exploited for a variety of purposes. A detailed bibliography of insects associated with this crop throughout the world had been reported (Rajamohan 1976). Twenty nine species of insects and one species of mite had been reported feeding on sunflower in Tamil Nadu (Rangarajan *et al.* 1973); 42 species of insects, 2 mites and one bird from Punjab (Sandhu *et al.* 1973). *Heliothis peltigera* was recorded causing damage to sunflower during April-May in 1978 and 1980 at Ludhiana (Punjab).

Occurrence of *H. peltigera* on sunflower is

DEPARTMENT OF ENTOMOLOGY,
PUNJAB AGRIL. UNIVERSITY,
LUDHIANA,
October 27, 1980.

a first report from India. The larvae feed on leaves and flower heads. One to six larvae were observed feeding on a single head. Infestation was comparatively more in the semi-opened heads. Fully-opened heads and closed flower heads had fewer larvae in them. Initially the larva attacked the bracts and later started feeding on developing seeds. Advanced stage larvae bored deep into the flower head.

Thanks are due to Dr. B. S. Chahal, Professor-cum-Head, Department of Entomology for facilities and to Director, Commonwealth Institute of Entomology, London, for arranging the identification from Dr. J. D. Holloway.

GURDIP SINGH
G. S. GREWAL
S. S. SANDHU

REFERENCES

- RAJAMOHAN, N. (1976): Pest complex of sunflower—A bibliography. *PANS* 22 (4): 546-63.
RANGARAJAN, A. V., MAHADEVAN, N. R. SUBARAJA, K. T., PALANISWAMY, P. AND SIVAPRAKASHAM, K. (1973): Pests and diseases of sunflower and their control. Technical Bulletin 1972-73. The Additional Director of Agriculture, Tamil Nadu, pp. 428-35.
SANDHU, G. S., BRAR, K. S. AND BHALLA, J. S. (1973): Pests of sunflower and other insects associated with sunflower crop. *Oilseed J.* 3 (2) 19-26.

25. NOTES ON THE MATING BEHAVIOUR IN *LACCOTREPHEs* *GRISEUS* GUER AND *L. ROBUSTUS* STALL (HETEROPTERA: NEPIDAE)

(With a text-figure)

INTRODUCTION

Information pertaining to the mating behaviour of aquatic insects, in particular Nepidae, is meagre except for the passing observations

by Rao (1969) on *Laccotrephes griseus* Guer. In the course of the bio-ecological studies of South Indian aquatic Hemiptera of the family Nepidae, it was found that various factors—visual, tactile and chemical—play an important